advantage of many of them, utilise; but they are none of them, fundamentally, explicable. We know now that different groupings and a varying number of electric infinitesimals can produce or serve as the constituent occasion—miscalled the cause, for here there seems to be only a necessary antecedent condition—for the appearance of larger atomic infinitesimals of different natures, qualities, powers; but we fail to discover how these different dispositions can come to constitute these different atoms,—how the differentiae in the constituent occasion or cause necessitate the differentiae in the constituted outcome or result. We know also that certain combinations of certain invisible atomic infinitesimals produce or occasion new and visible determinations quite different in nature, quality and power from the constituent infinitesimals; but we fail to discover, for instance, how a fixed formula for the combination of oxygen and hydrogen comes to determine the appearance of water which is evidently something more than a combination of gases, a new creation, a new form of substance, a material manifestation of a quite new character.

We see that a seed develops into a tree,

we follow
the line of the process of production and
we utilise
it; but we do not discover how a tree can
grow out
of a seed, how the life and form of the
tree come
to be implied in the substance or energy
of the
seed or, if that be rather the fact, how
the seed can
develop into a tree. We know that genes
and
chromosomes are the cause of hereditary
trans-